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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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			ART UNIT	PAPER NUMBER
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DATE MAILED: 12/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/723,987	Applicant(s) ERCHAK ET AL.	
	Examiner Monica Lewis	Art Unit 2822	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 and 75 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 and 75 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/05-9/05;11/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to the request for continued examination filed July 14, 2005.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/14/05 has been entered.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-26 and 75 provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 27, 29-44, 47-50 and 75 of copending Application No. 10/951,117. Although the conflicting claims are not identical, they are not patentably distinct from each other.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

In regards to claims 1-26 and 75, Erchak et al. ("Erchak") discloses the following:

a) a light emitting device, multi-layer stack of materials, a first layer configured so that light generated can emerge, dielectric function that varies spatially according to a pattern, (See Claims 27, 29-44, 47-50 and 75).

5. Claims 1-26 and 75 provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 7, 12-17, 19-21, 55, 58 and 59 of copending Application No. 10/724,029. Although the conflicting claims are not identical, they are not patentably distinct from each other.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

In regards to claims 1-26 and 75, Erchak et al. ("Erchak") discloses the following:

a) a light emitting device, multi-layer stack of materials, a first layer configured so that light generated can emerge, dielectric function that varies spatially according to a pattern, (See Claims 27, 29-44, 47-50 and 75).

Art Unit: 2822

6. Claims 1-26 and 75 provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/735,498. Although the conflicting claims are not identical, they are not patentably distinct from each other.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

In regards to claims 1-26 and 75, Erchak et al. ("Erchak") discloses the following:

a) a light emitting device, multi-layer stack of materials, a first layer configured so that light generated can emerge, dielectric function that varies spatially according to a pattern, (See Claims 27, 29-44, 47-50 and 75).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-5, 10-13, 15-22, 24, 25 and 75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Razeghi (U.S. Patent No. 5,834,331) in view of Krames et al. (U.S. Patent No. 5,779,924) and Krames et al. (U.S. Publication No. 2003/0141507).

In regards to claim 1, Razeghi discloses the following:

a) a multi-layer stack of materials including a light-generating region (MQW region) and a first layer (n-GaN) supported by the light-generating region, wherein a surface of the first layer is configured so that light generated by the light generating region can emerge from the light-emitting device via the surface of the first layer (For Example: See Figure 1).

Art Unit: 2822

In regards to claim 1, Razeghi fails to disclose the following:

a) the surface of the first layer has a dielectric function that varies spatially according to a pattern and the pattern has a lattice constant.

However, Krames et al. ("Krames₁") discloses the use of a layer (1) that has a dielectric function that varies spatially according to a pattern that has a lattice constant (For Example: See Figure 7c). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Razeghi to include the use of a layer having a dielectric function that varies spatially according to a pattern as disclosed in Krames₁ because it aids in providing more light into the ambient (For Example: See Column 3 Lines 1-6).

Additionally, since Razeghi and Krames₁ are both from the same field of endeavor (semiconductors), the purpose disclosed by Krames₁ would have been recognized in the pertinent art of Razeghi.

b) a detuning parameter with a value greater than zero.

However, Krames et al. ("Krames₂") discloses a detune with a value greater than zero (For Example: See Figure 3, Paragraph 41 and Paragraph 47). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Razeghi to include the use of a detune with a value greater than zero as disclosed in Krames₂ because it aids in providing efficient emission of the recombination energy (For Example: See Paragraph 16).

Additionally, since Razeghi and Krames₂ are both from the same field of endeavor (semiconductors), the purpose disclosed by Krames₂ would have been recognized in the pertinent art of Razeghi.

In regards to claim 2, Razeghi discloses the following:

a) the multi-layer stack of materials comprises a multi-layer stack of semiconductor materials (For Example: See Figure 1).

In regards to claim 3, Razeghi discloses the following:

a) the first layer comprises a layer of n-doped semiconductor material, and the multi-layer stack further comprises a layer of p-doped semiconductor material (For Example: See Figure 1).

In regards to claim 4, Razeghi discloses the following:

a) the light-generating region is between the layer of n-doped semiconductor material and the layer of p-doped semiconductor material (For Example: See Figure 1).

In regards to claim 5, Razeghi discloses the following:

a) a support that supports the multi-layer stack of materials (For Example: See Figure 1).

In regards to claim 10, Razeghi discloses the following:

a) the multi-layer stack of materials comprise semiconductor materials (For Example: See Figure 1).

In regards to claim 11, Razeghi discloses the following:

a) the semiconductor materials are selected from the group consisting of III-V semiconductor materials, organic semiconductor materials and silicon (For Example: See Figure 1).

In regards to claim 12, Razeghi fails to disclose the following:

a) the pattern does not extend into the light-generating region.

However, Krames₁ discloses the use of a pattern that does not extend into the light generating region (For Example: See Figure 7c and Figure 12). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Razeghi to include the use of a pattern that does not extend into the

Art Unit: 2822

light generating region as disclosed in Krames₁ because it aids in providing more light into the ambient (For Example: See Column 3 Lines 1-6).

Additionally, since Razeghi and Krames₁ are both from the same field of endeavor (semiconductors), the purpose disclosed by Krames₁ would have been recognized in the pertinent art of Razeghi.

In regards to claim 13, Razeghi fails to disclose the following:

a) the pattern does not extend beyond the first layer.

However, Krames₁ discloses the use of a pattern does not extend beyond the first layer (For Example: See Figure 7c). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Razeghi to include the use of a pattern does not extend beyond the first layer as disclosed in Krames₁ because it aids in providing more light into the ambient (For Example: See Column 3 Lines 1-6).

Additionally, since Razeghi and Krames₁ are both from the same field of endeavor (semiconductors), the purpose disclosed by Krames₁ would have been recognized in the pertinent art of Razeghi.

In regards to claim 15, Razeghi discloses the following:

a) electrical contacts configured to inject current into the light-emitting device (For Example: See Figure 1).

In regards to claim 16, Razeghi discloses the following:

a) the electrical contacts are configured to vertically inject electrical current into the light-emitting device (For Example: See Figure 1).

In regards to claim 17, Razeghi fails to disclose the following:

a) the pattern is partially formed of a component selected from the group consisting of holes in the surface of the first layer, pillars in the first layer, continuous veins in the first layer, discontinuous veins in the first layer and combinations thereof.

However, Krames₁ discloses the use of a pattern that is partially formed of a component selected from the group consisting of holes in the surface of the first layer, pillars in the first layer, continuous veins in the first layer, discontinuous veins in the first layer and combinations thereof (For Example: See Figure 7c and Figure 12). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Razeghi to include the use of a pattern that is partially formed of a component selected from the group consisting of holes in the surface of the first layer, pillars in the first layer, continuous veins in the first layer, discontinuous veins in the first layer and combinations thereof consisting of holes as disclosed in Krames₁ because it aids in providing more light into the ambient (For Example: See Column 3 Lines 1-6).

Additionally, since Razeghi and Krames₁ are both from the same field of endeavor (semiconductors), the purpose disclosed by Krames₁ would have been recognized in the pertinent art of Razeghi.

In regards to claim 18, Razeghi fails to disclose the following:

a) the pattern is selected from the group consisting of triangular patterns, square patterns, and grating patterns.

However, Krames₁ discloses the use of a pattern that is selected from the group consisting of triangular patterns, square patterns, and grating patterns (For Example: See Figure 7c and Figure 12). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Razeghi to include the

Art Unit: 2822

use of a pattern that is partially formed of a component selected from the group consisting of holes in the surface of the first layer, pillars in the first layer, continuous veins in the first layer, discontinuous veins in the first layer and combinations thereof consisting of holes as disclosed in Krames₁ because it aids in providing more light into the ambient (For Example: See Column 3 Lines 1-6).

Additionally, since Razeghi and Krames₁ are both from the same field of endeavor (semiconductors), the purpose disclosed by Krames₁ would have been recognized in the pertinent art of Razeghi.

In regards to claim 19, Razeghi fails to disclose the following:

a) the pattern is partially formed of holes in the surface of the first layer.

However, Krames₁ discloses the use of a pattern that is partially formed of holes in the surface of the first layer (For Example: See Figure 7c and Figure 12). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Razeghi to include the use of a pattern that is partially formed of holes in the surface of the first layer as disclosed in Krames₁ because it aids in providing more light into the ambient (For Example: See Column 3 Lines 1-6).

Additionally, since Razeghi and Krames₁ are both from the same field of endeavor (semiconductors), the purpose disclosed by Krames₁ would have been recognized in the pertinent art of Razeghi.

In regards to claim 20, Razeghi fails to disclose the following:

a) the detuning parameter is at most about 25% of the ideal lattice constant.

However, the applicant has not established the critical nature of “the detuning parameter is at most about 25% of the ideal lattice constant.” “The law is replete with cases in which the difference between the claimed invention and the prior art is some range or other variable within the claims. . . . In such a situation, the applicant must show that the particular range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range.” *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir.1990). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have various ranges.

In regards to claim 21, Razeghi fails to disclose the following:

a) the detuning parameter is at least about 1% of the ideal lattice constant.

However, the applicant has not established the critical nature of “at least about 1% of the ideal lattice constant.” “The law is replete with cases in which the difference between the claimed invention and the prior art is some range or other variable within the claims. . . . In such a situation, the applicant must show that the particular range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range.” *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir.1990). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have various ranges.

In regards to claim 22, Razeghi fails to disclose the following:

a) the pattern corresponds to a substantially randomly detuned ideal pattern.

However, Krames₂ discloses a pattern that corresponds to a substantially randomly detuned ideal pattern (For Example: See Figure 3). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device

Art Unit: 2822

of Razeghi to include the use of a pattern that corresponds to a substantially randomly detuned ideal pattern as disclosed in Krames₂ because it aids in providing efficient emission of the recombination energy (For Example: See Paragraph 16).

Additionally, since Razeghi and Krames₂ are both from the same field of endeavor (semiconductors), the purpose disclosed by Krames₂ would have been recognized in the pertinent art of Razeghi.

In regards to claim 24, Razeghi discloses the following:

a) the light-emitting device is selected from the group consisting of light-emitting diodes, lasers, optical amplifiers, and combinations thereof (For Example: See Abstract).

In regards to claim 25, Razeghi discloses the following:

a) the light-emitting device comprises a light emitting diode (For Example: See Abstract).

In regards to claim 75, Razeghi fails to disclose the following:

a) the surface of the first layer has features with a size of less than about $\lambda/5$, where λ , is a wavelength of light that can be generated by the light-generating region and that can emerge from the light-emitting device via the surface of the first layer.

However, the applicant has not established the critical nature of “the surface of the first layer has features with a size of less than about $\lambda/5$.” “The law is replete with cases in which the difference between the claimed invention and the prior art is some range or other variable within the claims. . . . In such a situation, the applicant must show that the particular range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range.” *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir.1990). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have various ranges.

Art Unit: 2822

9. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Razeghi (U.S. Patent No. 5,834,331) in view of Krames et al. (U.S. Patent No. 5,779,924), Krames et al. (U.S. Publication No. 2003/0141507) and Nitta et al. (U.S. Patent No. 6,803,603).

In regards to claim 6, Razeghi fails to disclose the following:

a) a layer of reflective material that is capable of reflecting at least about 50% of light generated by the light-generating region that impinges on the layer of reflective material, the layer of reflective material being between the support and the multi-layer stack of materials.

However, Nitta et al. ("Nitta") discloses a layer of reflective material (3403) that is capable of reflecting at least about 50% of light generated by the light-generating region that impinges on the layer of reflective material, the layer of reflective material being between the support (3401) and the multi-layer stack of materials (For Example: See Figure 3, Column 9 Lines 66 and 67 and Column 10 Lines 1-4). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Razeghi to include a layer of reflective material that is capable of reflecting at least about 50% of light generated by the light-generating region that impinges on the layer of reflective material, the layer of reflective material being between the support and the multi-layer stack of materials as disclosed in Nitta because it aids in increasing light output (For Example: See Column 10 Lines 2-4).

Additionally, since Razeghi and Nitta are both from the same field of endeavor (semiconductors), the purpose disclosed by Nitta would have been recognized in the pertinent art of Razeghi.

Art Unit: 2822

In regards to claim 7, Razeghi fails to disclose the following:

a) a distance between the layer of p-doped semiconductor material and the layer of reflective material is less than the distance between the layer of n-doped semiconductor material and the layer of reflective material.

However, Nitta discloses a distance between the layer of p-doped semiconductor material (3405) and the layer of reflective material (3403) is less than the distance between the layer of n-doped semiconductor material (3407) and the layer of reflective material (For Example: See Figure 3). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Razeghi to include a distance between the layer of p-doped semiconductor material and the layer of reflective material is less than the distance between the layer of n-doped semiconductor material and the layer of reflective material as disclosed in Nitta because it aids in increasing light output (For Example: See Column 10 Lines 2-4).

Additionally, since Razeghi and Nitta are both from the same field of endeavor (semiconductors), the purpose disclosed by Nitta would have been recognized in the pertinent art of Razeghi.

10. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Razeghi (U.S. Patent No. 5,834,331) in view of Krames et al. (U.S. Patent No. 5,779,924), Krames et al. (U.S. Publication No. 2003/0141507), Nitta et al. (U.S. Patent No. 6,803,603) and Biing-Jye et al. (U.S. Patent No. 6,169,294).

In regards to claim 8, Razeghi fails to disclose the following:

a) a p-ohmic contact layer between the layer of p-doped material and the layer of reflective material.

However, Biing-Jye et al. ("Biing-Jye") discloses a p-ohmic contact layer between the layer of p-doped material and the layer of reflective material (For Example: See Figure). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Razeghi to include a p-ohmic contact layer between the layer of p-doped material and the layer of reflective material as disclosed in Nitta because it aids in increasing light efficiency (For Example: See Column 2 Lines 15-38).

Additionally, since Razeghi and Biing-Jye are both from the same field of endeavor (semiconductors), the purpose disclosed by Biing-Jye would have been recognized in the pertinent art of Razeghi.

11. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Razeghi (U.S. Patent No. 5,834,331) in view of Krames et al. (U.S. Patent No. 5,779,924), Krames et al. (U.S. Publication No. 2003/0141507) and Nelson et al. (U.S. Patent No. 6,037,603).

In regards to claim 9, Razeghi fails to disclose the following:

a) a current spreading layer between the first layer and the light generating region.

However, Nelson et al. ("Nelson") discloses a current spreading layer (31) between the first layer and the light generating region (For Example: See Figure 3). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Razeghi to include a current spreading layer as disclosed in Nelson because it aids in spreading current to the entire active region (For Example: See Abstract).

Additionally, since Razeghi and Nelson are both from the same field of endeavor (semiconductors), the purpose disclosed by Nelson would have been recognized in the pertinent art of Razeghi.

Art Unit: 2822

12. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Razeghi (U.S. Patent No. 5,834,331) in view of Krames et al. (U.S. Patent No. 5,779,924) and Krames et al. (U.S. Publication No. 2003/0141507) and Joannopoulos et al. (U.S. Patent No. 5,955,749).

In regards to claim 14, Razeghi fails to disclose the following:

a) the pattern extends beyond the first layer.

However, Joannopoulos et al. ("Joannopoulos") discloses the use of a pattern that extends beyond the first layer (For Example: See Figure 5). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Razeghi to include the use of a pattern that extends beyond the first layer as disclosed in Joannopoulos because it aids increasing the response speed (For Example: See Column 2 Lines 5-18).

Additionally, since Razeghi and Lester are both from the same field of endeavor (semiconductors), the purpose disclosed by Lester would have been recognized in the pertinent art of Razeghi.

13. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Razeghi (U.S. Patent No. 5,834,331) in view of Krames et al. (U.S. Patent No. 5,779,924), Krames et al. (U.S. Publication No. 2003/0141507) and Lester (U.S. Patent No. 6,091,085).

In regards to claim 23, Razeghi fails to disclose the following:

a) the pattern is configured so that light emitted by the surface of the first layer has a spectrum of radiation modes, and the spectrum of radiation modes is substantially the same as a characteristic emission spectrum of the light-generating region.

However, Lester discloses the use of a pattern configured so that light emitted by the surface of the first layer has a spectrum of radiation modes, and the spectrum of radiation modes

Art Unit: 2822

is substantially the same as a characteristic emission spectrum of the light-generating region (For Example: See Figure 7 and Column 5 Lines 30-49). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Razeghi to include the use of a pattern that configured so that light emitted by the surface of the first layer has a spectrum of radiation modes, and the spectrum of radiation modes is substantially the same as a characteristic emission spectrum of the light-generating region as disclosed in Lester because it aids in providing a device with a higher light coupling efficiency (For Example: See Column 2 Lines 10-13).

Additionally, since Razeghi and Lester are both from the same field of endeavor (semiconductors), the purpose disclosed by Lester would have been recognized in the pertinent art of Razeghi.

14. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Razeghi (U.S. Patent No. 5,834,331) in view of Krames et al. (U.S. Patent No. 5,779,924), Krames et al. (U.S. Publication No. 2003/0141507) and Choi (U.S. Publication No. 2003/0222263).

In regards to claim 26, Razeghi fails to disclose the following:

a) the light-emitting device is selected from the group consisting of OLEDs, flat surface-emitting LEDs, HHLEDs, and combinations thereof.

However, Choi discloses the use of a high efficiency led (For Example: See Paragraph 1). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Razeghi to include the use of a high efficiency led as disclosed in Choi because it aids in improving efficiency (For Example: See Abstract).

Art Unit: 2822

Additionally, since Razeghi and Choi are both from the same field of endeavor (semiconductors), the purpose disclosed by Choi would have been recognized in the pertinent art of Razeghi.

Conclusion

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica Lewis whose telephone number is 571-272-1838. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zandra Smith can be reached on 571-272-2429. The fax phone number for the organization where this application or proceeding is assigned is 703-308-7722 for regular and after final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

ML
December 3, 2005

A handwritten signature in black ink, appearing to be 'ML', located at the bottom right of the page.